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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/618,797	07/18/2000	Toshio Yamada	WATK : 197	8862
27890	7590	11/29/2005	EXAMINER	
STEPTOE & JOHNSON LLP 1330 CONNECTICUT AVENUE, N.W. WASHINGTON, DC 20036			NECKEL, ALEXA DOROSHENK	
			ART UNIT	PAPER NUMBER
			1764	
DATE MAILED: 11/29/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/618,797

Applicant(s)

YAMADA ET AL.

Examiner

Alexa D. Neckel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 15, 2005 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 1-4, 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sussmilch et al. (6,405,437) in view of Rosynsky et al. (4,142,864).

With respect to claim 1, Sussmilch et al. discloses a canned ceramic honeycomb structure (12) comprising:

- a metal case (32);
- a ceramic honeycomb structure (28) not loaded with catalyst (col. 8, lines 31-34) contained within said metal case (32);
- a holding material (anchor mat, 30) between said ceramic honeycomb structure (28) and said metal case (32) having a common longitudinal direction and at least one peripheral edge perpendicular to said longitudinal direction (see figures 5 and 9); and

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an impermeable layer (end cap, 142) located on said at least one edge plane of the holding material (30).

Sussmilch et al. fails to disclose wherein the impermeable layer is also located between the honeycomb and case.

Rosynsky et al. discloses a similar device comprising a casing (12) for a honeycomb structure (28) with a holding material (42) located between the casing and the honeycomb structure as well as an impermeable layer/plug member (45) located at an edge plane of the holding material (42) as well as between the casing (12) and honeycomb structure (28) (see figures 1-3 and 7-10). Rosynsky et al. teaches that this plug member and its location increase the holding force exerted on the honeycomb element by the holding member, inhibits axial movement, avoids the need for providing end flanges (col. 2, lines 50-66) and aids in preventing passage of gases between the honeycomb element and casing (col. 3, lines 11-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to locate the impermeable layer of Sussmilch et al. not only at an edge plane of the holding material, but also between the honeycomb and casing in order to gain the many advantages taught by Rosynsky et al.

With respect to claim 2, the modified apparatus of Sussmilch et al. is substantially the same as that of the instant claim, but is silent as to the specific length of the impermeable layer.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select an appropriate size for the impermeable layer on the

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basis of its suitability for the intended use, absent showing any unexpected results, and since it has been held that when the only difference between the prior art device and a claim is a recitation of relative size, and the device with the relative size would not perform differently than that prior art device, the claimed device is not patentably distinct.

With respect to claim 3, Rosynsky et al. further discloses wherein the pressure properties of the impermeable layer (45) are approximately equal to or less than those of the holding material (42/43) in order to inhibit axial movement of the honeycomb element (col. 2, lines 50-66).

With respect to claim 4, an edge plane of the ceramic honeycomb structure (28) and the edge plane of the holding material (30) having the impermeable layer thereon are substantially in common (see figure 9).

With respect to claim 5, Sussmilch et al. it can be seen that the end cap (142) is adhered to the holding material (30) along one edge plane (see figure 9) and in Rosynsky et al. it can be seen that impermeable layer/plug (45) is adhered to the holding material (42) along one edge plane (see figures 1-3).

With respect to claim 10, the apparatus of Sussmilch et al. is substantially the same as that of the instant claim, but is silent as to the specific thickness of the partitions of the ceramic honeycomb structure.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select an appropriate size for the partitions of the ceramic honeycomb structure on the basis of its suitability for the intended use, absent showing

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any unexpected results, and since it has been held that when the only difference between the prior art device and a claim is a recitation of relative size, and the device with the relative size would not perform differently than that prior art device, the claimed device is not patentably distinct.

4. Claims 6, 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sussmilch et al. (6,405,437) and Rosynsky et al. (4,142,864) as applied to claim 1 above, and further in view of Close et al. (3,959,865).

The modified apparatus of Sussmilch et al. provides an impermeable layer on the edge of the holding material, but fails to disclose alternative materials by which to achieve this same result.

Close et al. discloses a similar exhaust gas treatment apparatus which comprises a ceramic honeycomb (20), a metal case (10), a holding material (30) and an impermeable layer (22) on an edge of the holding material (see figure 1). Close et al. further disclose wherein the impermeable material (22) is a thin film of paper which is impregnated with impermeable matter including fiber and organic materials (col. 3, line 55- col. 4, line 24).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the impermeable material of Close et al. for use in the apparatus of Sussmilch et al. in order to ensure that all of the exhaust gas being treated travels through the ceramic honeycomb structure as well as to inhibit movement of the honeycomb structure within the casing.

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5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sussmilch et al. (6,405,437) and Rosynsky et al. (4,142,864) as applied to claim 1 above, and further in view of Harding (6,017,498).

The modified apparatus of Sussmilch et al. provides an impermeable layer on the edge of the holding material, but fails to disclose alternative materials by which to achieve this same result.

Harding discloses a similar exhaust gas treatment apparatus which comprises a ceramic honeycomb (6), a metal case (4), a holding material (8, 8') and an impermeable layer (38) made of a rope (col. 3, lines 52-55) on an edge of the holding material (see figures 1 and 3) in order to form a gas tight seal (col. 3, lines 52-57). Harding also discloses wherein the impermeable layer (38) made of a circular cross sectional rope (col. 3, lines 52-55) and impregnated with impermeable matter (col. 3, line 65- col. 4, line 4).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the impermeable rope material of Harding for use in the modified apparatus of Sussmilch et al. in order to ensure that all of the exhaust gas being treated travels through the ceramic honeycomb structure by the gas tight seal.

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sussmilch et al. (6,405,437) and Rosynsky et al. (4,142,864) as applied to claim 1 above, and further in view of Machida et al. (5,782,089).

Sussmilch et al. discloses wherein the anchor mat is made of "an intumescent material or other suitable material" (col. 3, lines 39-44), but fails to disclose a non-intumescent ceramic fiber mat.

Machida et al. discloses a similar exhaust gas treatment apparatus which comprises a ceramic honeycomb (1), a metal case (2), a holding material (3) and an impermeable layer (4) on an edge of the holding material (see figure 1). Machida et al. further discloses wherein the holding material (3) is a ceramic fiber mat in a compressed state (col. 3, lines 36-41). It would have been obvious to one of ordinary skill in the art at the time the invention was made to select the compressed ceramic fiber mat of Machida et al. for the anchor mat of Sussmilch et al. since it merely the selection of a mat material recognized as suitable for a ceramic honeycomb exhaust treatment device.

### ***Response to Arguments***

7. Applicant argues that Sussmilch et al. does not provide for the end cap to be located between the ceramic honeycomb and metal case and therefore does not read on the revised claim.

The examiner agrees and has provided a new grounds of rejection above.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexa D. Neckel whose telephone number is 571-272-1446. The examiner can normally be reached on Monday - Thursday from 9:00 AM - 7:30 PM.

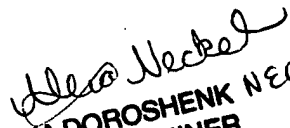
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alexa D. Neckel  
Examiner  
Art Unit 1764

November 23, 2005

  
ALEXA DOROSHENK NECKEL  
PRIMARY EXAMINER